described by N. Holmgren[1] in the development of a South American termite, *Rhinotermes taurus*. In this case the worker larvæ immediately after ecdysis, pass into a quisecent condition, very similar in general appearance to the one I have described except for the fact that they have no wings, and remain in this condition for a period varying from one hour to three days. Escherich[2] states that this must be regarded physiologically as a pupal condition since internal changes also occur. It will be noticed that in this case the quiescent period occurs only in larvæ and then after an ecdysis, whereas in *Termes flavipes* it has only been seen to occur during the transition period between the nymphs and adults of the sexual forms and then for the greater part before the ecdysis, so that this approaches more closely to the normal pupal stage of Holometabolous insects.

EXPLANATION OF PLATE IX.

Fig. 1. Quiescent nymph of *Termes flavipes*, ventral view.

Fig. 2. Same, lateral view.

Fig. 3. Wing of adult *T. flavipes* before expansion. *c*, costal vein; *Sc*, subcostal vein; *R*, radius; *M*, median; *cu*, cubital; *An*, anals.

Fig. 4. Freshly emerged adult of *Termes flavipes*, ventral view.

Fig. 5. Same, dorsal view.

Fig. 6. Same, lateral view.

MISCELLANEOUS NOTES.

Migration of Alabama argillacea Hübner.—An unusual invasion of the cotton moth, *Alabama argillacea*, occurred apparently throughout the Middle States in late September and early October of the present year. According to the reports of those who have given the subject of the cotton moth careful study, the species, which is of South American or West Indian origin, feeds in the United States exclusively on the cotton plant. As cotton is grown no nearer to New York than Virginia the moths covered a distance by flight of at least four hundred miles in some instances. This seems remarkable when the condition of the specimens is taken into consideration, for in most cases

[1] Studien über südamerikanische Termiten. Zool. Jahrb. Abt. f. Syst., XXIII, 1906.

[2] Die Termiten oder Weissen Ameisen. Leipzig, W. Klinkhardt, 1909.

these were exceedingly fresh, and with the fore wings covering the hind wings, as the moths do when at rest, appeared as if they had just issued from pupæ. It should be mentioned, perhaps, that the species has occurred around New York in other years, but in small numbers only. The insects were first noticed around New York (New Brighton, Staten Island) on September 21, when two specimens were found clinging to a fence; other specimens were noted in the same locality in the several days immediately succeeding until on the 25th of the month seventeen were counted beneath one city light (Grossbeck). On this same day Mr. Chas. W. Leng, reported the insect from Port Richmond, S. I., where, he said, hundreds were gathered on a window attracted by lights within. Also on the same day in the evening the writer of this note noticed them in similar numbers hovering over a field of ragweed on Staten Island. Mr. G. von Krockow reported the species from several localities in New York City and Brooklyn, the principal swarm occurring in these places on September 26. He also reported them for Mr. O. Giles at Asbury Park, N. J., on September 28, where they were said to have occurred in great numbers. Mr. W. T. Davis collected a specimen at Rossville, in the southern part of Staten Island on October 1. The principal flight seemed to take place between September 26 and 28, and from then on the species occurred in ever decreasing numbers. In New York and Brooklyn the specimens seemed to be generally distributed being reported by E. Shoemaker, A. Mutchler, C. Wunder, G. W. J. Angell, J. W. Angell and G. P. Engelhardt from as many different places. Mr. Engelhardt further reported their occurrence at Yaphank, L. I., where the species came abundantly to sugar and Mr. Wunder said they were being swept up in the Pennsylvania Station at Jersey City. Away from New York and New Jersey reports came from "between Albany and Syracuse, where a specimen was seen between the double windows of a sleeping car" (Dr. H. E. Crampton); Providence, R. I., where they were said to be everywhere in the city and suburbs in swarms (E. D. Keith); New Brighton, Pa., where 241 were counted on a twelve-foot porch, 22 of which were on one window sill (Frank Merrick); Philadelphia, Pa., September 26, where they were being swept into rows on the sidewalks and gathered up (Chas. L. Pollard); and Washington, D. C., where they occurred in myriads throughout the city (Wm. T. Davis)

The latest date on which the species was noted in the vicinity of New York was October 9 (Davis; von Krockow).—JOHN A. GROSSBECK.

The Periodical Cicada in the Half Way Hollow Hills, Long Island, N. Y.—In this JOURNAL for December, 1910, there is an article on the unexpected appearance of the periodical Cicada in considerable numbers in the Half Way Hollow Hills, Long Island, N. Y., in June of that year, and it was suggested that the clearing away of the forest in places might have had something to do with their appearance before the general visitation of Brood No. 1 in June, 1911.

In the spring and summer of 1911 careful search was made for the periodical Cicada in the Half Way Hollow Hills but none was found, not even in the areas that had been wooded for many times seventeen years. In the low land about Wyandanch Mr. Frederick M. Schott heard several singing and Mr. Charles L. Watkins saw two individuals. It was ascertained, however, that the Cicadas had occurred in great numbers in still another locality in 1910, in a place further to the north and nearer to the Dix Hills.

From the foregoing it appears that the range of Brood No. 1 (1910), which occurs in southern Pennsylvania, in Maryland, West Virginia, etc., may be extended to include the Long Island locality.—WM. T. DAVIS.

Deltometopus amœnicornis with Ants in Beech Stump.—On June 26, while collecting with Mr. E. A. Bischoff, on the brow of the hill west of the Clove Valley, Staten Island, N. Y., the stump of a beech was found which was so far decayed that parts of it could be readily pulverized by hand. This material was sifted and a few specimens of Pselaphidæ were captured as anticipated; but in addition, what had not been expected, six specimens of the Eucnemid named above were also sifted out of the rotten wood. The entire mass was populated by ants which were much more numerous than the beetles and the association of the beetles with them was probably accidental for these beetles are often beaten from the branches of the beech trees a little later in the season and three specimens were in fact captured in that way by Mr. Bischoff on the same hill in July.—C. W. LENG.

Lasius (Acanthomyops) claviger in Tahiti.—Prof. C. H. Edmondson of Washburn College, Topeka, Kansas, has recently sent me, among some ants which he collected in Tahiti, a vial containing eight workers and four winged females of *Lasius* (*Acanthomyops*) *claviger,* a species hitherto known to occur only in the northern portion of the United States. Having doubts of the authenticity of the label on the specimens, I wrote Prof. Edmondson and received the following reply: "In regard to the specimens of the common ant, *Lasius claviger,* I assure you that they were also taken in Tahiti during August, 1908. I have a mental picture of the exact spot in Tahiti where I obtained them; in a broad street in the village of Papeete, under stones. I could not possibly have substituted Kansas ants, for I have never collected any ants in this state or in any other part of the United States, and there are no ants in my insect collection. Moreover, the Tahitian material was labelled in the original vial, soon after collecting." This statement leaves no doubt that *L. claviger* has been recently imported into the Society Islands and is sufficiently well established to produce queens. The only other known case of a North American ant being introduced into the islands of the Pacific is *Pogonomyrmex occidentalis* Cresson. This well-known harvester of the high plains of Yyoming, Colorado, New Mexico and the adjoining states, was recorded several years ago by Forel as occurring in Hawaii.—W. M. WHEELER.

A Desert Cockroach.—The cockroaches, so far as their habits are concerned, are commonly supposed to constitute a rather monotonous group. This is probably due to the small number and uninteresting behavior of the species that come under the observation of entomologists dwelling in temperate regions. A glance at the more recent literature, however, shows that the Blattoidea are really one of the most extraordinary groups of insects. Their immense antiquity, the diversity of their fossil forms, the probability, recently emphasized by Handlirsch, that the group produced the ancestors of the modern Termites and Hymenoptera, the gregariousness of certain species, foreshadowing the social habits of these same Termites and of many Hymenoptera, the wide dispersal of certain household species, the development of ovoviviparity in several tropical forms and of myrmecophilous and sphegophilous habits in others—all these pecularities

show that, during their long history, the cockroaches as a group have not remained as idle and stolidly generalized as we have been inclined to believe. In connection with the description by Shelford (The Zoölogist for June, 1907) of an aquatic cockroach (*Rhicnoda natatrix*) from the pools of Borneo, the following observations on a desert species, are worth recording. On November 26, 1910, while I was standing in the hot, glaring sun in the midst of the sandy desert north of Yuma, Arizona, I saw a small swarm of about a dozen insects flying toward me. They settled one after another on the sand, ran hurriedly over its surface for a short distance in the direction of their previous flight and then suddenly took wing again. They seemed to be migrating by alternately flying and running over the sand in a southwesterly direction. A few minutes later another smaller detachment, taking the same course, passed over the same spot. On capturing one of these insects, which behaved so much like certain species of *Cicindela,* I saw, to my surprise, that it was a cockroach of about the size of our common "croton-bug" and of the same pale, grayish yellow color as the sand. I then set about collecting a number of specimens. Some of these were later identified by Mr. J. A. G. Rehn as *Homœogamia subdiaphana* Scudder subsp. *mohavensis* Rehn and Hebard. I walked about over the sandy desert for some hours but no more swarms appeared. Although these observations are very fragmentary, they prove that this Blattid in its adaptation, at least during certain seasons, to an exposed, diurnal life in dry deserts, exhibits a remarkable contrast to our northern cockroaches with their pronounced positive thigmotaxis and negative phototaxis.—W. M. WHEELER.

PROCEEDINGS OF THE NEW YORK ENTOMOLOGICAL SOCIETY.

MEETING OF TUESDAY, OCTOBER 18, 1910.

Held at the American Museum of Natural History at 8.15 P. M. In the absence of the president, Dr. E. G. Love was elected to preside. Twenty members and one visitor present.

The minutes of Tuesday, October 4, were read and approved.

The secretary read a communication from the curator, Dr. F. E. Lutz, reporting that arrangements would be made by the Museum authorities to take